Notebook, N-10-03-06

			50	100	150	200	250	300	350	400	450	500
932 739 green 104f dump green then flake equiv one lamp-	932		1360	1337	1380	1397	1357	1260	1280	1262	1080	1123
	933		1347	1337	1380	1400	1367	1260	1160	1177	1050	1117
739- 36 mlg Green 104f - 6 Mlg f 188 Dumps 7330	985	1207	1270	1273	1303	1353	1333	1363	1353	1047	9 mins 1290	1210
	986	1230	1243	1243	1280	1323	1337	1310	1317	1120	1233	1197
739 35.9 green 4 mlg f 189 D 7200	987	1240	1300	1280	1303	1353	1363	1410	1330	1187	9 mins 1240	1173
	988	1230	1323	1323	1353	1413	1420	1427	1400	1153	1363	1170
Dup 667 Except thru 30 on 190 35.7 green 4.3 f 200 D - 7500	1077	1223	1310	1330	1293	1270	1280 x3	1187 x5	1070 x7	9 mins 1200	1133	Split 1060
	1078	1220	1333	1390	1337	1313	1293	1253	1117	1287	1190	1160
Dup of 663- 6.2 f 35.7 green 7 555	1079	1153	1223	1257	1220	1233	1267	1260	1153	9 mins 1333	1253	1217
	1080	1160	1280	1293	1250	1247	1267	1223	1100	1303	1180	1153
739 Green 159 f 4.2 35.8 7.240.	1382	1240	1183	1277	1257	1280	1290	1223	9 mins 1307	1187		
	1383	1250	1213	1320	1333	1343	1323	1260	1320	1183		
	1384	1253	1197	1317	1333	1343	1343	1280	1317	1200		
	1385	1250	1210	1317	1347	1313	1323	1237	1293	1217		
	1386	1253	1187	1303	1307	1277	1290	1223	1287	1150		
	1387	1247	1183	1287	1253	1260	1280	1213	1287	1183		
				1302	1330	1303	1308	1237	1301			

	530	
932	1031	970
933	1000	937
985	1197	0
986	1160	
987	1070	
988	1077	

			50	100	150	200	250	300	350	
739 Green 159 f	1400	1213	1197	1250	1313	1283	1280	1183	1198	
4.3 47.7 green	1401	1220	1180	1300	1333	1270	1277	1183	1210	
7.100	1402	1213	1187	1360	1363	1290	1280	1193	1193	
No Li on 1st part of Coeds-not	1403	1203	1200	1307	1340	1373	1313	1217	1203	Co 7.2
test – Balled up by Hooped	1404	1213	1207	1273	1360	1340	1277	1100	1120	
	1405	1207	1207	1300	1373	1293	1267	1190	1183	
			1196	1288	1357	1296	1282	1174	1159	
739 Green 4.4 f 159 –	1417	1150	1150	1213	1277	1230	1233	1037	1060	
59.7 Green	1418	1147	1150	1237	1293	1243	1200	1053	1023	
6.862.	1419	1150	1157	1237	1280	1193	1200	1050	983	
	1420	1157	1143	1250	1280	1283	1273	1123	1083	C
No Li 1st part test	1421	1160	1130	1243	1280	1257	1230	1097	1080	
	1422	1167	1130	1297	1277	1233	1220	1097	1060	
			1143	1296	1291	1291	1246	1079	1045	
739 Green. 4.4 f 159	1449	1043	1220	1203	1203	1180	1097	1003	963	
70.2 Green	1450	1053	1230	1210	1217	1143	1060	943	933	Co
6.932.	1451	1027	1237	1210	1230	1163	1067	943	933	Bound 2 Lifers
No Li 1st part of test	1452	1020	1217	1207	1200	1140	1033	930	850	Face under
	1453	1057	1240	1220	1230	1167	1053	927	900	Microscope
	1454	1020	1230	1207	1178	1137	1040	943	887	
			1229	1209	1209	1155	1054	951	914	

			50	100	150	200	250	300	350	400	450	
								.9V				
719- 159f 4.4 159f	1521	1190	1193	1257	1247	1283	1150	1247	1190	1157		
36 Green.	1522	1187	1193	1253	1238	1260	1133	1220	1157	1140		
Dump green thin flake thin tamp	1523	1163	1160	1187	1217	1270	1133	1240	1177	1140		
180 D 7.142	1524	1203	1190	1257	1233	1260	1077	1213	1167	1147	Co	
	1525	1190	1207	1250	1283	1290	1177	1240	1227	1158		
	1526	1203	1213	1247	1266	1290	1160	1223	1187	1120		
			1193	1225	1246	1276	1154	1211 .9V	1184			
719- 159-	1533	1243	1260	1300	1290	1307	1200	1200	1140	1027		
4f 48 Green	1534	1210	1250	1300	1320	1307	1247	1213	1157	1027		
141 D	1535	1227	1257	1310	1297	1307	1233	1200	1117	1037		
	1536	1223	1257	1310	1323	1357	1240	1200	1060	1010		
	1537	1223	1257	1303	1310	1307	1237	1217	1120	1057		
	1538	1197	1247	1303	1310	1350	1280	1217	1113	1053		
			1255	1309	1308	1322	1239	1208 .9V	1118			
854- 159f	1555	1237	1307	1327	1347	1287	1337	1267	1123	1057		
4- 36.5 Green	1556	1227	1313	1327	1327	1310	1270	1267	1147	1057	Kellum	
174 D	1557	1217	1273	1270	1290	1267	1227	1267	1140	1083	Big Stack	
Dump green Thin f tamp 6.992	1558	1250	1347	1343	1377	1363	1317	1300	1150	1007	Co	
	1559	1253	1317	1327	1350	1330	1253	1303	1180	1077		
	1560	1237	1313	1327	1350	1233	1273	1300	1180	1053		
			1322	1320	1390	1294	1260	1234	1153			

Split + 3 to 4 Rings Broken

new Fe

Notes	No.		50	100	150	200	250	.9 300	.9 350	.9 400	
854 – 159 f	1606	1183	1290	1317	1250	1223	1127	1193	1160	1060	
4.2 47.6 Green	1607	1160	1287	1313	1233	1177	1117	1193	1147	1020	
125 D	1608	1163	1300	1330	1277	1243	1157	1240	1160	1027	
Dump green then f-Tamp. 6 773	1609	1187	1320	1333	1280	1250	1180	1247	1197	1017	
	1610	1177	1313	1333	1290	1300	1223	1273	1193	1050	
	1611	1190	1300	1323	1280	1243	1187	1260	1197	1057	
			1302	1326	1268	1239	1165	1234	1176		
1164 – 25 lb Dup – Dump green then f-Tamp	1885	1047	1210	1287	1277	1270	.9 new Fe 1413	1330	1283	1293	
4.2 24.1 Green	1886	1080	1267	1363	1357	1287	1540 –	1390	1260	1267	
294 D 6.871 G 8 105	1887	1077	1197	1360	1300	1263	1473	1383	1323	1360	
			1225	1316	1311	1273	1445				
Dup 1885	1888	1113	1350	1443	1393	1330	1437	1230 x			
4 f 36 green	1889	1087	1270	1357	1313	1223	1433	1123	Co split		
205 D 6.939 7,800	1890	1103	1310	1433	1387	1330	1433	1200			
			1310	1411	1364	1294	1434				
Dup 1885	1891	1117	1350	1477	1440	1390	1460	1190			
4 flake 48 Green	1892	1080	1260	1393	1327	1320	1400	1083 x	Co Split –		
150 D 7.030 7,664	1893	1117	1337	1460	1450	1420	1477 –	1200			
			1316	1443	1406	1377	1446				
1164 – 159 f	2078	1167	1333	1377	1343	.9 1387	1233				
4.5 35.8	2079	1203	1347	1410	1347	1387	1280				
198 D	2080	1187	1330	1380	1343	1397	1313				
Dump green then f-Tamp.	2081	1177	1327	1380	1313	1380	1303				
6.800 green 7 665	2082	1167	1330	1350	1250	1320	1223				
	2083	1170	1320	1377	1343	1380	1380				
			1331	1379	1323	1375	1289				

1164 – 159f
4.5 47.8 Dump green then f Tramp
6.976 – 7633

2084	1200
2085	1200
2086	1180
2087	1210
2088	1207
2089	1217

1164 159f Dump Green then f-Tramp
4.4 60.4
7.058 7573

2090	1117
2091	1110
2092	1123
2093	1110
2094	1123
2095	1123

Dump 2078
4.4 71.4 Green
Dump G then f-Tramp
100 D
7.232 green – 7.472

2096	1047
2097	1077
2098	1073
2099	1077
2100	1080
2101	1077

50	100	150	200	9 new ft
1397	1453	1393	1397	1247
1347	1397	1377	1367	1273
1373	1450	1417	1447	1317
1373	1450	1390	1363	1177
1397	1470	1410	1397	1260
1390	1463	1413	1430	1240
1379	1447	1401	1400	1246
1353	1420	1360	1347	1177
1323	1393	1353	1330	1177
1323	1403	1373	1360	1280
1317	1357	1350	1357	1317
1327	1357	1340	1310	1213
1327	1363	1350	1350	1213
1326	1362	1354	1343	1229
1300	1350		1253	
1293	1383		1357	
1270	1350		1230	
1293	1357		1310	
1327	1373		1327	
1303	1353		1253	
1298	1361		1284	

				50	100	150	200	250		
Dup 2078 – 1164 – Dump G Blue f-Tump		2102	1127	1327	1330	1340	1373	1363		
		2103	1147	1400	1400	1423	1450	1363		
2 lb f of Bismuth f		2104	1130	1353	1373	1307	1440	1340		
36.1 4.3		2105	1127	1350	1370	1397	1457	1447		
		2106	1140	1377	1450	1397	1450	1423		
Bismuth	7745	2107	1107	1357	1473	1423	1460	1417		
				1326	1383	1361	1438	1387		
Dup 2102	1164	2108	1203	1467	1550	1527	1567	1479		
4.3 47.8		2109	1210	1513	1547	1503	1417	1358		
Bismuth 2 lb f		2110	1183	1513	1567	1563	1497	1457		
7.037	7674	2111	1213	1517	1533	1493	1433	1418	all split a bingo broken	
Dump green f Tump –		2112	1147	1517	1570	1567	1530	1463		CO
149 D		2113	1213	1567	1630	1440	1523	1410		
Bismuth				1515	1566	1500	1485			
Ra 1164 – but Dup of t No 1253 –		2294	1210	1380	1447	1480	1367			
159 f 4 – 47.6 –		2295	1200	1383	1440	1463	1353			
		2296	1210	1390	1467	1510	1413			
Dump green thing f Tump		2297	1213	1417	1460	1460	1363		Co as it will splet	
162 D 7038 green	7650	2298	1220	1440	1530	1520	1420			
		2299	1213	1417	1463	1493	1407			
				1424	1468	1488				

			50	100	150	200	250	300	350	400	450	500	550
16.8% Bismuth in Green	579	1200	1447	1433	1443	1313	1437	1507	1277	1343	1437	1520	1353
Shaved f 106 - 1.2 chlorides in 21K 4 di ÷ rate	580	1193	1446	1427	1450	1297	1457	1477	1397	1387	1450	1493	1360
then change to 21K 2 di 7.860			1446	1430	1446	1305	1447	1492	1337	1365	1443	1506	1356
16.8% Bismuth Green	595	1326	1440	1400	1443	1287	1460	1493	1330	1340	1483	1517	1360
Chg chlo twice in 21K 8 di ÷ rate	596	1320	1440	1433	1443	1320	1423	1440	1390	1303	1337	1460	1263
then change to 21K 2 di 7.924.			1440	1416	1443	1303	1441	1466	1360	1321	1410	1459	1311
159 f. 854.	1612	1220	1343	1377	1327	1367	1353	1487	1410	1320			
45 24.2	1613	1213	1300	1343	1248	1290	1323	1450	1393	1330			
2 grms Bismuth / ammonium lactate 7.680	1614	1217	1313	1347	1280	1307	1327	1377	1360	1313			
			1319	1336	1243	1321	1321	1425	1365	1321			
1253 Green 4 f 96 green	2649	1147	1283	1253	1250								
Dump G then f then Tamp	2650	1147	1313	1273	1263								
7085	2651	1130	1313	1300	1257								
21K2 Li			1303	1325									
Dup 2649	2652	1100	1250	1200	1223								
	2653	1090	1213	1200	1170								
21K1 Li 7000	2654	1113	1257	1227	1213								
			1270	1216									
1253 Green 5.3 Bismuth f 2.6 Lot	2655	1187	1430	1400	1350								
100 95.7 Green 21K2 Li	2656	1187	1413	1333	1307								
Dump G then f then Tamp 7150	2657	1197	1473	1353	1360								
6.774 grms			1439	1362									
Dup 2655	2658	1147	1310	1250	1333	Co-							
21K1 Li	2659	1133	1310	1290	1350								
			1310	1270									

Pin block -
It was that may [illegible] 1st [illegible]
[illegible] 3rd [illegible] for [illegible]

	600	650	700	750
	9			9
579	1550	1553	1483	1560
580	1437	1527	1567	1553
	1480	1540	1515	
	3 [illegible]			
595	1547	1528	1597	1553
596	1540	1563	1477	1520
	1543	1522	1537	

NOTE

2/3/13
1556

734 — 16.8% Bi (Dupa 565) 4 24 239	571	1183	
565 of mat'ly with bubbly slag distinctly lighter than 2.1K3 fine slag pt. 2.1K2 distinctly lighter than 2023	572	1177	
7.990			
Goldstein 128 —	2565	1213	
1.7% Bi precip in NaOH 4 24 — 7470	2566	1230	
Goldstein 125	2603		
1.7% Bi precip in NaOH 4 24 — 7380	2604		
Goldstein 216	2750	1140	
6.8% Bi precip in NaOH, 25 0 D 159 f — 7.180	2751	1153	
Goldstein 144 200 D	2752	1203	
5.10% Bi precip in NaOH. 159 — 6 gap gross 6930	2753	1193	
Goldstein 209 —	2782	1113	
159 f 4 24	2783	1133	
5.10% Bi precip in (NaOH) — 7120			
Goldstein 215	2784	1213	
24 — 5.10% Bi in gross — 7.510	2785	1210	
Goldstein 152	2776	1197	
1.7% Bi in gross 24 gross — 7.165	2777	1200	

Important note — changing % improves Bi lubes on first 2nd or 3rd Run + that increased capacity which factor 33% on 1st charge comes back = shows is not so with non Bi improves on 1st Run when they grow but no of Iron goes out something bad

50	100	150	200	250	300	350	400	450	500
1467	1500	1497	1417	1410	1477	1267	1260	1373	1463
1393	1257	1400	1400	1360	1437	1270	1250	1447	1417
1410	1393	1448	1408	1395	1456	1268	1255	1410	1440
1357	1347	1353	1293						
1390	1347	1363	1343						
1373	1347	1358	1318						
1290	1307	1300							
1293	1310	1300							
1291	1305	1300							
1373	1410	1463	1383						
1310	1413		1390						
1341	1415								
1370	1480		1443						
1377	1443		1443						
1373	1461								
1397	1393	1400	1433						
1450	1387	1400	1460						
1433	1390	1400							
1450	1413	1433	1467						
1450	1427	1440	1487						
1450	1420	1437							
1413	1457		1430						
1380	1443		1390						
1396	1450								

— NOTE

NOTE

2.83 Mole per gram Wiley

	550	9 mole 600	650	700	750
571	1367	1477	1568	1568	1667
572	1327	1577	1587	1583	1633
	1347	1527	1578	1558	

NOTE

RA·734 16.8%. Bismuth 4.1 48 grams 1123 f 7455	3031	1153
	3032	1160
Goldstein 8.5%. Bi, pure gram-grams 4.1 24.1 7570	3049	1233
	3050	1243
734 - soaked 20 min Conc Bi of 1 HNO3 all	525	1140
then liquid poured out then dried & put in KOH — heated sediment [illegible] then washed & decantation	526	1147
filtered [illegible] grams of Oxalate 1012 Cor. 8213	527	1147
21162 ∫ 10H		
1129 (1164) mixed with 15% antimony oxide — burn 20 on 190 152 D 1123 f 485 6.258 grm 7950	3332	1327
	3333	1330
1129 (1164) 4 f 48.3 146 D — BISMUTH metal 2 grms connected to iron pockets 2 mah cell 7.380	3334	1247
	3335	1257
	3336	1243
1164 - 159 f 24 grams then 4 f then 2 grams 24 grams then 4 f then 1 amp one temp for both dumps 286 Dumps 6 545 grams - 7.700	2830	1267
	2831	1260
	2832	1287

50	100	150	200	250	300	350	400	450	500
1377	[illegible]								
1340	[illegible]								
1358	[illegible]								
1360	[illegible]								
1397	1-								
1378									
1350	1247	1337	1350	1413	1327	1453	1260	1117	1237
1293	1237	1290	1153	1320	1390	1450	1247	1137	1277
1300	1243	1393	1320	1293	1377	1450	1200	1133	1233
139									
1607									
1583									
1600									
1353									
1360									
1347									
1403	1467	1453							
1400	1467	1420							
1413	1487	1463							
1405	1474	1441							

Neutr

	550	600	650	700	750	800	850	900
525	1020	1150	1343					
526	1007	1150	1360					
527	1020	1200	1303					
			1355					

Goldstein's Bismuth 1000 –

	½ B.off				B.off
125	1.7	No 590 No 510	160		6.8
128	1.7	No 510 No 490	161		2.8
			162		2.75
130	1.7	"	163		3.40
135	8.5	No 590 No 490	164		4.25
139	4.25	No 550 No 590	166		1.70
140	5.10		167		3.40
141	5.10	all yellow	168		5.10
142	5.10	same	173		3.40
144	5.10		175		5.10
148	1.70		179		8.50
149	3.40		189		5.10
150	5.10		190		8.50
152	1.70		191		8.50
153	3.40		196		8.50
154	5.10		197		10.20
155	6.80		198		3.40
158	2.50		199		3.40
			201		5.10
			202		8.50
			203		10.20
			204		5.10
			205		5.10
			206		6.80
			207		8.50
			208		3.40
			209		5.10
			210		6.80
			211		8.50
			214		8.50
			215		5.10
			216		6.80
			217		8.50

NOTE

Regulcit ⅞ taken out test cells after young Bird, and after 250 Runs – 100 cut bad from lack of use, from Cells 1630 to 1639 –

average of 10

	V	½	
	896	—	Before covering out cells up to 4 holes
8th Run	2289	3516	
15th "	2540	3796	
16 "	3047	4658	These are Reg SB All Irons
17	3377	4709	
18	2936	4431	

(Row 7) x split

			50	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800
1164	24	Bi 2 lb Double T	1382	1321	1428	1498X	1398X	1341X	(1275 70)									
719	24	Bi 2 lb Single T	1458	1418	1363	1374	—	1350	(1256 70)									
719	24	Ring Flicks Single T	1117	1132	1174	1207	1121	1246	1160									
719	36	Bi 2 lb Single T	1485	1492	1447	1463	1379	1356	(1112 70)									
719	36	159 - Single T	1193	1272	1295	1275	1138	1164	1174 -									
719	48	Bi 2 Single T	1478	1431	1444	1468	1338	1256	1066									
719	48	159 Single T	1254	1304	1305	1322	1240	1151	1115									
854	36	159 " "	1312	1220	1357	1295	1280	1172	1153									
854	36	Bi 2 lb " "	1485	1437	1448	1432	1347	1318	1212									
854	24	Bi 2 lb " "	1424	1418	1368	1416	1371	(1271 70)	1378									
854	48	Bi 2 lb " "	1481	1402	1331	1401	1338	(1339 70)	1301									
854	48	159 " "	1302	1325	1268	1240	1165	(1175 70)	1170									
854	24	159 Bi Plug 2T	1319	1356	1283	1321	1334	1362	1388									
854	24	159 - 5 lb cotton T	1267	1317	1271	1242	1248	(1401 70)										
1164	48	159 Single T amp	1316	1443	1406	1377	(1446)											
1164	36	159 "	1331	1379	1323	1275												
1164	48	159 "	1380	1447	1400	1400												
1164	60	159 "	1248	1382	1364	1342												
1164	70	159 "	1295	1361	—	1288												
1164	36	Bi 2 lb Single T	1361	1389	1381	1440.5												
1164	48	Bi 2 lb " "	1515	1556	1505	1464.9												
1164	24	104 Double T	1250	1264	1223	1264	1215	1234	1286	1187	(1288)							

NOTE

A4 398 Turbo loaded oldstyle machine
731 $Ni(OH)_2$ 1A+2A plates 962.7g
original Electrolyte 21K 120 L 1.066.
Oxidized plate

Run	I V	V/2	
5	189	203.7	
22	208	221.5	
53	216.5	—	
101	217.5	—	
141	222	242.5	
194	205	227.5	
247	185	204.5	new Sol 30 L 1.066 L.C.[illegible]
253	199.2	215.5	
285	188	210.5	
309	180.7	202.7	
361	171.5	191	
415	175.5	193	new Sol 11.2 "
422	176	195.7	
475	175	191.5	
528	175.7	195.2	
580	172.2	190.5	
635	159.5	173	

Normal

Run	I V	
7	172.7	
26	182.7	
35	182.5	
49	183.5	
89	183	
107	186.5	
135	184.5	← not taken for efficiency between 135-4 25 d
250	165.5	new Sol 30 L 1.066 L.C.[illegible]
257	178.5	
288	165	
312	158	
364	150	
419	151.7	new Sol
425	153.2	
479	152	
532	153	
585	149.5	
640	135.7	

A4 — 2310 2311 2312 2313
RA 892 – Hz 2min/f – Sol originally 21K 100 gm Lioth. in all Cells
2311-12-13 have Sols removed every 50 Runs Dil Sols being put in each
as noted below 2318 run Reg changing Sol Body often 225 Runs.

Run	2310 1V	2310 1/2	2311 1V	2311 1/2	2312 1V	2312 1/2	2313 1V	2313 1/2
5	176	192.5	177	191	176	187.2	176.7	189.0
20	191.5	204.0	191.5	209.5	190	204	188.5	204.0
35	185	201.7	187.2	211	188.5	205.7	187.2	203.0
50	182.7	202	186.5	212.5	187.5	207.2	185.7	205
66	185	203	191.5	216.0	191.5	212	188.5	205
newsol. 2310 no change				2311 21K no Li		2312 21K 11.2 Lth.		2313 22.5 Kilos
73	186.5	205	200	222.5	200	220	195.5	215
125	197	197	183.5	202.5	187	208.5	183.5	208.5
Changed 2311-12-13 again no change								
131	175	195	188	205	193	216.5	188	216.5
185	175	194	180	196	190	216	185	210
Changed 2311-12-13 Same as after 50								
191	170	195	182	199.5	188.5	216.7	187.2	219.2
244	175.5	195.5	188	202.5	194	215.5	192.5	229
changed 2310-11.2			2311 Strength 2312 11.2 2313, 22.5					
249	198.7	210	192.2	204	204	222.5	186.5	229
302	188.5	206	183.7	203.2	189.7	213.0	190.5	221.2
Solution edge			21K Street		21K 11.2 Lth		21K 22.5 Lth	
310	188.5	207	187.2	203	197	215	192.2	234
363	182.5	203	184.5	202	191.5	215.2	196	235
372	195	?						
			Street no Lioth.		11.2 gm Lth		22.5 g Lth	
372	180	204.5	189	206.5	194.5	219.5	195.5	233.2

Normal—

Run	2310 1V	2311 1V	2312 1V	2313 1V	
7	162.5	162.5	162.5	162.5	
38	165.5	165.5	165.5	165.5	
70	163.5	163.5	163.5	163.5	Removed as attach.
77	161.5	170	170	170	
129	152.5	160	162.2	162	"
136	153.2	161.2	166.7	166.7	
188	149	157	163	163	
194	150	159.5	163.5	164.7	"
247	149.2	156.5	163.5	166	
253	165	160	167.5	166.7	changed Sols
305	162.5	155	164.5	168.2	
314	162.2	155	168.5	168.2	
365	161	157	165	175	
					new sols
376	156.5	155	166	172	

A 8 = 267 & 270 (new)
Cells of neg poles reduction of week ending March 28 1910
NiOH2 1183 & L35 Fe 1291 21K 90 gm Liter per A4 cell

Run	267 1	267 1/2	270 1	270 1/2
1	438.5	456.5	445	467
2	309	316.5	312.5	322
4	346.8	365.3	346.8	367.8
6	348	368	350	369.5
34	398.5	424	405	433

Average Lost of A 8 25.1

Run 1 48 hours at 30 dec 6.0
" 2 10 hours 60 14 hours 30
" 4 15 " 60

Cells nearly square 4 7/8 X 5 1/2
Holds 2700 cc of Solution just twice as much as A4.

Normal

Run	267	270
10	327	331
35	337	340

A4 — 3784 — 3785 3786 3784 - 90 Lights
1164 green 48 only Dumpi flecks L11. 3785 100
3786 110

	3784		3785		3786		
Run	1 v	1/2	1 v	1/2	1 v	1/2	
4	153	159	160.2	167.7	158.7	167.5	
19	176	181.2	179	186	181.2	192.5	
34	183	187.5	188.7	193.2	197	205.7	
49	185	186.5	187	192.5	191.5	205	
64	185	190	191.5	196.2	195	202.5	
117	176.5	181.5	183.5	187.5	190.5	197.7	
170	172	180	176	185.2	190.7	200.5	
223	145	158	164.7	181.2	186.5	199	changed Sept 11.2
231	166	171.5	172	178.5	186.7	197.2	
284	171.7	175.5	180	184.2	191.5	201	

Normal -

Run	3784	3785	3786	
7	146.5	151	151.2	
23	160	166	167	
38	155	156	168	
53	154.5	161.5	168.5	
67	160.7	166.5	169.5	
121	148.7	155.2	164	
174	143.2	146.7	164	
226	125	140	160	Saturday
235	153.5	157.5	165	
289	144	154	163.7	

A4 4711 4712 4713 Regcelle oct 1909

1½ mm Plate Single Temp 27 mig in Electrolyte 21KT

	80 Li		90 Li		100 Li	
	4711		4712		4713	
Run	1V	1/2	1V	1/2V	1V	1/2V
4	164.2	169	170.7	178.5	168.5	173.2
19	176.5	182.2	184	192	177	185.5
34	175	180.5	183.5	191.5	176	185
49	181.5	187.5	190.5	199.5	184	194.5
64	176.5	184.2	184	194.5	181.2	194
117	183	197.7	185	196.7	180	187
170	181.7	190	180	193.5	187	201.7
223	173.5	185	174.7	192.5	180	202
231	182	193	187	201.2	190	209.5

	4711	4712	4713
Run	1V	1V	1V
8	151.5	157.5	156.5
23	157.7	166.2	162.5
38	157	163	159
53	160	166	161
68	159	163.2	163
120	162	162	156.5
174	44.7	155	158.5
227	155	157	160
236	161	163.7	166.2

4711 was cut open to ascertain the queer behaviour found spring washer on iron plate connecting rod broken in 2 pieces leaving plates loose + working bad contact cell repaired + dressed

A4 3011 3012 3013

Before cells assembled Fe: treated as follows
3012 Fe cell H at 130 Fahr
3013 " " but reversed cold
3011 as Regular having same mixes as above

Run	3011 1 V	3011 ½	3012 1 V	3012 ½ V	3013 1 V	3013 ½ V	
4	165	172	157	172.5	163	178.2	Cells had very poor flake.
18	185	190.5	184	194.7	186	198.7	
34	178	185	178	187	183	195.5	
50	182	188.5	182.5	190	191.5	202.2	
65	180	187.7	180	190	188.7	201.5	
118	182.5	192.5	182	194	190	203.5	
171	183.2	196.5	181.5	194.7	188.2	203	
224	184.2	198.2	181.5	191	184.2	201.7	changed Sol.
231	188.5	201.5	185.5	199.5	191.	206.5	
283	184	200	182.7	199.5	184	204	

Normal 3011 – 3012 3013

Run	3011 1 V	3012 1 V	3013 1 V	
7	155.7	151.5	156	
24	160	162.5	165	
38	158.5	160	164.5	
53	160	161.5	168.5	
69	160	160	167.5	
122	160	159	165	
175	159.5	158.5	163	
228	158.7	156.5	158	changed Sol.
235	159.7	157.5	160.7	
288	162	161.5	163.5	

A4- 478 479 480

These cells from made of new loaded litres

N(4H)2 739- Flake 28 KN + 203 BN

478 21K 90 L.
479 " 105
480 120

	478		479		480	
Run	1/2 V	1/2 V	1 V	1/2 V	1 V	1/2 V
5	178.5	190	173.5	191	178.5	196.0
27	204.3	209.7	200	215	201.5	220.0
47	200.5	209.2	200	217.7	202.5	221
67	203.5	214	205	224.0	206.2	228.0
95	198	212.7	193.5	222	189	221.0
122	202.0	215.5	200	228	200	232.2
176	188.5	203.2	184	206.5	179	211.0
251	194.2	220	181.7	209	180	210
258	205	226.5	193.2	216.5	193.5	219
311	188	219.5	178	205	175	198.5
364	180	222	172.5	205	175	200
416	192	228	181.5	209	178.2	200
470	190	227	172	207	172.2	199.5
479	195	233.5	179	216.2	179	206.5
477	198	229	193.5	220	189	211.2
531	191.5	219.5	182	210.5	180	202
584	190	219	174.5	205	173.5	197.2
646	178.5	201.5	162.	183.5	158.7	178.7

22.5

New Solution 22.5 per litre

new Sol 21K 11.2 L. litre

Normal

	478	479	480
Run	1 V	1 V	1 V
180	168.2	165	167.0
255	165	154.2	154
262	177	170.7	172.2
315	169	157	155.0
368	164.2	154	155.0
421	172	161	159.5
474	165	153	152
481	168	162.5	160.
534	160.5	156.7	155.7
589	163.5	154	154

New Solution 22.5 Litres

new Sol 21K 11.2 L. per litre

A4- Cell 4 — Inference this cell apparently [illegible]
Acrylic [illegible] fitted with Ceramic bottom & paper [illegible]
Vane slipper 987 RQ- Plate 230 B4X 4.2- 27.4
21K 100 Light

4

Run	IV	½
4	184.7	191.5
19	187	195
35	193.5	202.5
49	184	197
63	178.7	194.7
117	177.5	191.5
170	177.2	190
224	167	181.5
234	182.5	198.5

changed Fuel

Normal

Run	IV
8	168.5
21	168
38	168.5
53	162.2
68	160
121	157
174	154
229	153
239	158.5

changed Fuel

A4 376 • Cell been running in Phono Truck
731 ni: 1a + 2a flow 953-954 7x
old loaded litres 21K 120 Li OH.

Run	1V	½V	
4	172.5	—	
13	202	—	changed Sol put in straight KOK
17	203.5	—	Stood 4 weeks then assembled in Tray with 5 others
20	196	—	Run in Truck 12 weeks 72 runs say
96	187	191	Run in Truck 1 years Total 7605 miles to date May 17 1910
399	177.5	182.5	Solution weak-will change
			Changed Sol. 21K 11.2 Litres Li OH
407	191.5	199.5	

Normal All A cells with lower number than 476 had oxidized flakes.

	1V	
404	160	changed Sol.
412	167.5	

A4— 231 232 — cells been running Phono Truck
728 Ni.OH. 24 floats 952 7# old loaded.
Cells originally run in 21K 11.2 grms/litre 3 runs, then saturated LiOH put
in No Rem. 1st 28 Runs below made with Saturated LiOH.
oxidized flake

	231		232		
Run	1 V	½	1 V	½	
1	111.5	160	146	161.5	
6	169	174.7	171.7	178.5	
14	184.5	188.7	187.7	193	
22	189	194	193.	200.2	
28	188.5	193.7	193.5	201.5	changed Sol to 21K Strength
32	197	201.5	204.5	210.7	" again 21K "
36	205.7	209	212.5	218.5	
41	203	208.5	208.5	215	
117	192.7	198	194	202	Used in Truck 12 weeks 1000 Mile
420	170	181.5	163.5	181	" 1 yr about 7605 "
428	189.5	199.5	191	202.5	Sol now weak will change
					Solution changed 21K 11.2 gm/litre

Normal

	231	232	
Run	1 V	1 V	
425	156.2	153.7	Changed Sol.
433	165	167	

Fe cells 1668 1679

Bad Fe from Tube in dum-mum cells which went bad — assembled with 4 Long Lasting — 21K 11.2 Li per Lasting —
To determine effect of complete discharge [illegible] on the cell discharge [illegible] cell cells chgd 15th April 1908 [illegible]

		1	2	3	4	5	
1668	Taken off	395	600	765	875	900	
1669	discharged	620	690	835	945	980	
1670		495	640	780	870	965	
1671	1 V = cell	755	870	995	1060	1200	
		541	700	849	982	1012	average
1672	Taken off	600	1145	1510	1610	1775	
1673	discharge	900	1480	1680	1765	1855	
1674	.8 volt	465	925	1200	1370	1580	
1675		900	1395	1645	1675	1800	
		716	1236	1509	1610	1752	average
1676	Taken off	860	1895	2120	2100	2070	
1677	at	1000	1675	1980	1840	1870	
1678	.5 Volt	840	1680	2065	2025	2060	
1679		1165	2080	2260	2150	2085	
		966	1812	2106	2029	2021	average

Bad Fe from test cells —

8 grms Reg 5 B "Fe

1765-6-7	discharged at	500 ma rate	3 hours run Reg		1680
1768-9-70	"	1000	"	"	1570
1771-2-3	"	1500	"	"	1548
1774-5-6	"	2000	"	"	1395.

Shows low rate is best, Holland to try lower rates

Something wrong don't check up

Used 1164 green - $3\frac{1}{2}$ Lb lamp

Dumped 24 green made 1 Tamp - Weight gen 7.495

		335 Dumps	312		
"	48	" 197 D	197	"	7.380 115
	60	" 158	133.6		7.305 75
	96	80	77.7		7.085 220

Dup of above but 2 lamps after dumping

24	339 D	314	7.603 66
48	165	157	7 537 35
60	142	115	7 502
96	83	76	7 371 131

24	1 T	7495	108	
24	2 T	7603		
48	1 T	7380	157	
48	2 T	7537		
60	1 T	7305	197	
60	2 T	~~7502~~		
		7585		
96	1 T	7371	206	

A-4 Cells 10485 10486

10485 Continuing 95 g-Ty ~~unbreaked~~ which were treated before assembly

" " 24 hours at 130 °F

10486 Dry 24 hours 130 °F then v Reserve → 24 hours at 130 °F then respects cells breakaway

21KOH 87 LiOH

Run	10485 1 V	10485 ½ V	10486 1 V	10486 ½ V
3	184	188	177	184.5
17	192.5	197.5	200	207

Hutchinson

Normal

Run	½ V	1 V
8	122.5	164.5
20	168.7	175.5
36	170	175.

A4 – 1576 1577 Special Exput

	1576		1577		
Run	1 v	½	1 v	½	
5	175.2	195.7	175.2	192.5	On Run 37 1576 chg) Reg qualitiv)
19	198	219	191	208	obtnd 6 months Changed then discrg without further change
36	201.5	217.5	195	209.7	Off 1577 was allowed to chgm)
37	3.7	89.7	191.7	213	6 months after discharged
38	172.5	204.5	188.5	201.5	– then charged – discrg regular
39	190	204.5	187.5	200	
gave is endurance 7 runs					
52	199	214	193	202.2	
53	196.2	210	187	197.5	
54	191.2	209	187.5	198.5	

Normal

Run	1576	1577	
58	170	165	Prolonged inaction appears to be a little harmful, – in about the same degree charged or discharged

A 4 cell - 10487 Rod of Bismuth in contact with Nickel plate 21K 87 L04.

10487

Run	1 V	½ V
3	178	183.5
17	192	198
32	190	197

Have it further on

Normal.

10487

Run	V
8	161.5
20	169
36	170

Experiment of leaving $Ni(OH)_2$ exposed to air in galvanometer room for 1 month —

854 $NiOH_2$ 1123 f - 4.2 23.8 1 month

First day 264 Δ 265 Δ 7352 7363 } 7357

Third day 258 Δ 255 Δ 7482 7474 7478 121 mlg/gram

Date	Time on Road Hr	Min	Actual Run Time Hour	Min	Miles Covered	Recording Watt Hours	Watt hours Consumption at Bus Bar Per Mile	Watt hours Consumption at Motor	Recording ampere hours	Number of Trips	Schedule Time on road MPH	Actual Running Time MPH
3/2	9	55	7	22	52.47	35065	1109.70	688 00	993	11	5.29	7.12
3/3	8	38	8	32	47.7	31050	1050.00	651 00	1	10	5.53	5.6
3/4	9	50	9	35	54.5	31425	930 60	577 00	1	11.5	5.55	5.69
3/5	7	59	7	23	42.93	26325	985 40	611 00	1	9	5.39	5.82
3/6	11	8	10	48	62	32700	853.20	529.00	1	13	5.57	5.74

35 Steps per trip 7.4 steps per mile

Trip 3/6 = 75.7 watts per ton mile

Cost car about 7 tons including irregular number of passengers

200 cells A4 =

A4 Loaded each heavy hydroxide 1129 dry wt of ob.
Dumps 15594 24 mg f X32 72 1303
593 36 "
596 48 "
21K 87 g 1.044 per A4

Run	15593	1/2	15594	1/2	15595	1/2
19	182.5	192.2	179	188	182.2	192

	15593	15594	15595
9	170	168	168

A 4 – 390 – Fosfosphono Trench 731 m 1A+2Af 962 72
old loaded original Sol. 21K 60 grms di litt
45 g per litre – Oxidized flake

Run	b	°5	
1	167.5	168.5	changed Sol removed fresh with 21K – 45 grms di litt per litre
2	180.5	183	fresh 21K + 45 gr di lich per litre organic
3	180.7	186.7	
4	172.5	176.2	
5	176.2	181.7	
6	185	189	Previously Sol
7	179	183	Put in fresh 21K 45 grms di per litre organic
8	182.5	189.5	
9	187	190.5	
12	199.5	207	had 6 overclips
19	207.5	215.5	Run – break 12 weeks 72 runs 1000 cycles
95	210.5	224.5	" " 1 yr 500 " 7605 "
398	191.7	204	changed Sol 21K 11.2 litt litre
405	195	210	

Run	1 V	
402	176.7	changed Sol –
409	178	?

A 4 380 Cell been running Phone Touch has 731 Ni
1 w 2 a f 402 72 — orig electrolyte 21K 120 Lott.
old hard cells Oxidized flake

Run	1 V	½	
1	172	174	allowed to run) charged 48 h
2	178	188	" "
3	183	194.2	" " 4 days
4	184	196.7	
5	180	189	
10	195.7	204	Had 4 Reg overcharg runs
19	207.6	214	" 8 "
95	201.5	205.7	Cell run in hinch 12 weeks (72 runs) 1000 miles
398	189.5	196.6	" " 1 year 7605 miles 300 Runs
402	193.5	208.5	Changed SOP 21K 11.2 g/liter d. Ott.

Normal -

7 hrs at 30 —

Run		
402	172	note very high efficiency
409	173	Changed SOP

A4 — 387 — Rum — Thorn Truck 731 ni 1 an 2 a flake
original sol 21K 120 litt. old horse
oxidized flake

Rum	1'	.5	
1	discharged	120	amp hours only rallowed stand 24 h
2	220	244	
3	182.5	196	
4	185	197.5	stood 24 hours overnight day
5	190	202.5	
6	191.2	202	
7	195	206.5	
8	200	209	Had 6 more overchg loads
15	212.5	228	Calcium ne truck 12 weeks 72 runs 1000 miles
91	205	209	" " 1 yr 300 " 7605 "
394	188.5	198	Changed Sol 21K 11.2 g litre litt.
401	193.5	203	

Normal-

398	170	Changed Sol
405	172.5	

A4 2317 Lithium administered gradually by
Chemistry solution
RQ 892 - Stake #2 (Made 2 min)
original Sol 21K 22.5 Lioh per Litre

Run	1V	1/2	
1	200	215	put in fresh solution same as original
2	167.5	170.7	" " "
3	162.5	168	" " varies water "
4	170	180	" " "
5	176	186.7	
6	184.2	195	Reg chg rates water 15h at 30
7	182.7	191.7	
22	188	195	
37	178	188.5	
52	184	198.5	
87	181.5	189.2	
121	180	193	
174	181.5	196	
227	171.5	189.5	changed Sol to K21 11.2 gm Li per liter
285	188	200	
291	182.5	195.5	
345	163	185	

Normal

Run	1V		
10	165		
24	161.5		
39	156		
56	158.2		
70	154.5		
125	154.5		
178	154.2		
232	145.5		changed Sol
237	157		
296	150		
350	142.5		

A4 – 482 739 Ni-Off 28 Xn + 203 Bn flakes
990 Sp. has been loaded had 8% Kott. + 120 li for 3 Runs
at about after cathode 25% K put in

Run	1V	.5V	
6	167.8	185.2	
26	193.2	207.5	
45	199.2	214.7	
64	198.2	214.7	
92	200.7	219	
120	204	223.5	
173	197	218.5	
231	187	216.7	
			put in 21K + 22 gm li per liter
395	186.2	231	gave several high rate runs + one reverse
			treatment to improve voltage of the Sp
418	193	216.5	
461	192	223	changed Sol put in 21K 11.2 li per liter
467	197	228.2	
521	193.5	220.5	
578	181	215.7	

Normal

178	167.2	
234	161.5	chg Sol to 21K 225 gm liter
241	165	
293	164.5	
348	167	
401	168.7	
465	163.7	changed Sol to 21K 11.2 li per liter
472	168.7	
525	167.5	
582	160	

A4- 1575- Single Tamp loading
21 K. 100 gm oil OH

Run	Chg	Dis	Amp 1V	½ V
5	15 to 30	30	174	191.2
19	"	"	195.2	209.5
34	"	"	202.5	218.5
49	"	"	200	222.5
65	"	"	208	235
121	"	"	207	241
174	"	"	198	236
227	"	"	200.5	233
	Fresh Solution 21K 11.2 gm oil			
233	"	"	206	236
287			199	229
340			185	204.5
395			181.2	198.5

1575 Normal

Run	Chg	dis	1 Volt
8	Thums 30	30	163.7
22	"	"	169.5
53	"	"	175.5
69	"	"	177
125	"	"	174.5
176	"	"	173.2
230	"	"	167
	Fresh Sol 21 K 11.2 gm oil		
237	"	"	175
291			170
344			160
399			150

Cuneley heavy loading ß - poor stuff

A4 = 3408 + 3549 -
Contain same N + flake 3408 lube stock not reperforated
3549 Regular 21K 100 gm 40H.

Run	Chg 15 at 30	Dis 30	3408 1V	3408 ½V	3549 1V	3549 ½		
4	"	"	146.7	156.5	155	158.7		
19	"	"	167.5	179.5	173.5	188		
34	"	"	166	175.5	178	188		
49	"	"	165	176.7	174	186.2		
64	"	"	169.7	179.5	178.7	188.5		
117	"	"	167	175.2	176.5	185.5		
171			145	164.7	172.5	188.5		
225			106.5	146.5	156.2	180.7	Chg 5 at 11.2	
232			177.5	187.5	185	196.7		
285			165	175.7	176.7	190.7		

3408 3549

Normal
Chg 7 H 30 dis 30

Run	3408 1V	3549 1V		
7	141.7	150		
23	149	155		
38	150	158.7		
53	147.5	159		
69	144	155		
121	136	155		
175	115	149		
229	89	129.5		
235	145.5	160.		
289	128.5	150.5		

Long change
Bismuth flake 2.26 Pot 24 mlg green-50 green
21K 100 LiOH –
Chg 15H 30 dia 30

B1	B2	B3					
	B1		B2		B3		
Run	1V	½V	1V	½V	1.V.	½V	
5	215	235.5	215	233.7	215	233	
21	221	242.2	220	236	220	238	
35	225	244.2	217	224.2	217	228	
51	227.5	250.5	218.7	225	226	226.5	
66	222.5	245	213.7	220	213.5	221.2	
119	216.2	236.7	210	219	211.5	221.5	
175	217.2	230.5	203.5	213.2	206	216.7	
228	200	217.2	187.5	200	192	205	
	new sol 21K		112 gm LiOH				
236	202.5	221	196	207.5	197	212.5	
290	204	217.5	200.7	212	196	209	
343	1	—	190	203.5	189	202	
			182.5	197.5	180	194.7	
396	—				—		
	361 194	210.5					

X B1 hung need after 343 Run for temperature tests –

See note in Notebook book

B1 B2 B3

Normal 7 hours 30 dia 30

Run	B1	B2	B3
9	176	176	176
24	180	177	177.5
42	179.7	173	179.7
70	180	172.5	175
123	175	168	169.5
179	177.2	162.2	162.5
233	168.7	157.5	160
	new solution		
240	167.2	160	160
294	165	165	159
346	—	162	160
400		153	151.5
	365 160		

A4 S5 Contain Fe plates which run 7605 miles
in Phoenix Truck 7/2/44 962 contain Nos 1179 – 1183 MOH.
L 35 Plate 21K 87 gr 2.011 per A4

Run	V	Vz
4	180.7	185
20	193.5	199.5

S5 was machined for another
axle & put on Endurance
Section & given 2 Endurance
Runs before Reg run No 1

Run	V
9	165
215	165.7

15H at 30 dia 30

			Run 5			Run 19			Run 34		
	No	Hr									
A4 = 1575	1575	174	191.2	1952	2095				2025	2185	
Simple Temp Reading											
21K + 100 gm 21 off.											

A4 – 404 – old Loading 21K 120 LiOH.
15H 30 Dis 30 Oxidized flake

Run	1V	½V
3	167.5	190
17	192	213.2
30	199.7	—
43	205	—
57	205	226.5
85	210	235
114	205	227
176	188.2	201.7
232	172.5	200

*fresh Electrolyte 21 KOH ——

239	182	199
292	154	201.5
345	172.2	195

gauze 18 Neg overchg pulling fresh 21K in after each 2 or 3 tests

372	188.5	204
425	188.5	206
478	181.7	199
530	179.5	200.5
585	165.2	187

A 4 404
Normal 7H at 30 dis 30

Run	1.V
8	160
21	172
34	174.5
47	177
179	163
236	150

Put in new 21 KOH ——

242	157.7
295	157
349	150.7

gauze 18 neg overchgs with fresh K 21 – Each 2 tests & changes sol

377	152
429	151.3
483	152.7
535	151.
590	138.5

sol not removed as last change was made on 367th Run

Old Loaded A4 Cells

466 – Electrolyte 21K 120 Li
467 " 21K 100 Li
468 8%K 120 Li for 3 runs then 25/KOH. –

outside liquid cells were identical

Oxidized flake

Run	466 1V	466 ½V	467 1V	467 ½V	468 1V	468 ½V
5	165	196.7	178	191.5	171	183
16	196	218.7	193.5	204.5	192.5	204
29	206.7	219.2	203.5	208	202.5	212.5
42	211.2	222	206	214	201.5	208.5
56	212.5	227.5	208.5	214.5	203.5	211
85	201.7	217.2	199.5	209.5	199.2	206
114	205.2	221.5	205.2	217	207.7	214.2
167	187.5	200	190.5	200.2	193.5	200
223	181.2	197.2	187.5	201.7	192.5	205
	Put in fresh KOH 21 11.2 grms Li per litre					
230	187.2	201.2	191.2	201.5	198.5	203
283	185	202	194	209	201.5	215
336	185	199.5	195	212	205	220
390	177.2	192.2	183.5	203.5	195	213.5
443	173	190	182	200	190	214
	Put in fresh KOH 21 11.2 grms per litre					
450	181.5	197.5	192.5	210	198	216.5
501	188.5	202.2	197.5	217.7	206.5	225
556	178	195	185.5	209.2	195	219.5
610	173.5	191.5	183.	206.5	193.2	218.5

A 4 old loaded

Run	1V 466	467	468	
8	162.5	162.5	161.5	
20	175	172	170	
35	178.2	174.5	171.2	
48	181	177.5	176	
170	162.5	164.5	168.7	
227	158	160.7	161.5	
				new electrolyte
233	169	172	169.5	
287	165	167	168.5	
340	161	166.5	170	
394	155	160	166.7	
447	152	160	166	
				new electrolyte
453	156.5	164	170.5	
507	161.2	169	174.2	
562	156.5	162.5	169.5	
614	152	156.7	164	

A4 – 10487

Cell having Bismuth Rods contact with Nickel plate – 21K 87 grms LiOH.

Run	1 V	½ V	
1	205	215	45 h at 15
2	178.7	183.5	10 h 20 + 14 h 15
3	178	183.5	"
4	186.5	192	15 h 20
15	191.5	197.5	
32	190	197	
48	190	199.7	
67	191.5	198	
120	187	200.5	

A4 – 10487 Normal

Run	1 V
5	143
8	161.5
19	166
20	169
36	170
51	168.5
71	165
124	160

A4 - 10485 - 9.5 gm Fe pockets not treated
10486 - 9.5 " " treated by chg 24 hours
then Reverse 24 hours both at 130° Fahr — 21K87 grms 1.84.
Same Reg Tubes both coffs

Run	10480 1.V	10480 1/2 V	10486 1 V	10486 1/2
4	188.7	192.2	182.7	193.2
17	192.5	197.5	200	207
48	191	199.5	199.5	207
67	193	199	197	206
120	191	202.5	193	206.5

A4 10485
10486 Normal

Run	10485		10486	
8	162.5	169.5	164.5	177
20	168.7	174.5	175.5	183.5
51	165.7	—	173.5	—
71	165	—	167	—
124	163.5		165	

A4- 488 21K 120 grms LiOH — one of the first new loaded cells. S

Run	IV	1/2
5	168.5	187.0
19	180	195.0
26	196.5	212
67	195.5	219
129	185	199.7
182	165	198
235	168.7	202.0
242	174.	197.5
295	175	203.0
349	169	196
402	170	195
455	169.2	199.0
462	170	203.5
516	165	192
568	164.2	188.7

new electrolyte 11.2 Li per liter 21

changed sol 21K 11.2 g per liter LiOH

488 Normal

Run	V
406	150.
459	150
466	159.3
522	145
572	142.2

new sol

checked by insulation to 1/2 V

1/2 pochels removed from Tube cells colmah head run 250
Times Hot a 1/2 got bad —

Dis 300 Mm

	Pem 1	2 1V	2 1/2V	3 1V	3 1/2	Dec 75 1V	1/2	6th 1V	1/2	6th 1V	1/2	Dec 300 1V	7th 1/2	1V	8th 1/2	1V	9th 1/2	Dis
1630	815	965	2540	1600	2120	1062	2335	1287	2562	1350	2612	2315	3675	2330	3650	2370	3650	1315
1631	725	745	2100	1620	2695	1150	2100	1387	2412	1475	2425	2130	3245	2170	3255	2190	3245	1105
1632	1090	1210	2585	1950	3215	1300	2400	1500	2612	1600	2700	2385	3650	2420	3685	2450	3680	1230
1633	1265	1350	2725	2285	3520	1625	2750	1900	2987	1950	3087	2560	4020	2695	4170	2635	4070	1435
1634	835	975	2300	1700	2955	1062	2137	1250	2387	1300	2437	2110	3285	2165	3345	2140	3325	1185
1635	1230	1360	2790	2275	3545	1562	2737	1787	2975	1887	3050	2500	3875	2595	3990	2470	3805	1335
1636	900	1040	2650	1685	3200	1025	2317	1250	2537	1350	2625	2380	3765	2365	3695	2400	3735	1335
1637	700	750	2025	1430	2500	1000	1925	1162	2012	1250	2137	1975	2960	1995	2960	1990	3055	1065
1638	700	740	1820	1470	2465	1050	1937	1250	2175	1287	2187	1955	2980	1995	3030	1990	3055	1065
1639	700	780	1730	1540	2475	1150	2050	1362	2262	1400	2337	2030	3190	2165	3325	2145	3320	1175

A4 – 551 + 568 – new lonzed Cells contain 2 of of different numbers but are identical in other respects.
Electrolyte 8% KK 120 litres for 3 Runs then changed to 25% KOH.
Oxidized flake

	551		568	
Run	1 V	½ V	1 V	½ V
6	168.7	187.5	173.2	189.2
27	192.5	210	195	210.5
42	193	208	189.2	203.5
65	197	208.7	192.5	204
99	202	218.5	194	207
122	199.2	215.7	192	203.5
177	200	224	190	209
230	197	221	190	207
			fresh solution 21K 11½ g. Li	15.6
236	205	231.5	200.5	215
290	204.5	229.5	199	215
343	200	229.5	191	212.5
396	199.2	228	195	216
448	188.5	215.5	185	208.7
457	195	225	190	216.5
509	194	221.2	192	215.5

551 + 568 Normal

	551	568
Run	1 V	1 V
9	161	163.5
46	171	167.7
70	174.5	165.5
101	171.5	165.5
127	171	166.2
180	170	162
234	165	155.2
		fresh Electrolyte
240	175.7	167
294	171.2	165.7
346	167.5	162.
399	168.2	164.7
452	159.5	162.5
463	165	160.7
513	161	158

A4 – 2314 2315 2316

Reg single Tamp bondy

Cell kept dry temps during 2 2nd day run

2314 dry 74° due 74
2315 " 120 " 130
2316 " 74 " 120

Run	2314 1 V	2314 ½ V	2315 1 V	2315 ½ V	2316 1 V	2316 ½ V	
6	180	190.2	165	185	169	196	
21	192.5	203	184	198	188.5	199.2	
34	190	205	195	203.5	187.5	203.5	
50	188.5	212.2	188.5	214	187.5	206.5	
65	189	206.7	189.5	208	189	198.5	
118	186	204.5	188	208.5	185	199.5	
172	183.7	203.2	189	211	182.5	198.5	
225	176	200	185	208.2	180.5	199.7	new Electrolyte 11-2
233	198.5	220	198.5	220	195	210.2	
286	193.5	211.5	195	214.7	194.5	211.2	
340	183.5	207.7	188.5	211.7	188.7	207	
395	169.2	191.7	172.7	196	172.5	195	

2314
2315
2316

Normal

Run	2314 1 V	2315 1 V	2316 1 V	
10	162.5	153	160	
24	169	163.5	165.5	
38	165	164	161	bad test
54	170	170.5	165	
68	167.7	167.7	162	
122	161.5	164.5	160	
176	157.2	160	156.5	
230	152.7	159.5	152.7	new Electrolyte 11-2 distill
237	166.5	170	164	
290	164	165.7	165	
344	159	163.5	162	
398	147.5	151	150	

A4 – 2752 2753 2754 Tube plates similar in all
2752 has 9.5 gm Fe
2753 10 "
2754 8.5 "
21K 100 diff spectra

Run	2752 1V	2752 1/2	2753 1V	2753 1/2	2754 1V	2754 1/2 V	
4	168.5	177.5	160	170	167	181.5	
19	178.5	190	176.5	188.5	180	195	
34	188.7	198.5	188.7	197	191	204	
50	177.5	188	175.5	185	183	196	
66	180	187.5	178	185	186.5	196.5	
124	169.5	180	167	178	181.5	193	
180	146.7	168	153.3	169	180.5	193	
233	73.5	115.5	131.7	156.5	175	190	chng Sol 21 mch
240	180	190.3	180	188.3	191.5	203.7	
291	177.5	185.5	177.5	185.7	190.7	203.2	
346	167	175	172	181	188.7	205	

Normal.

Run	2752 1V	2753 1V	2754 1V
7	153.7	155	156.7
23	158.5	157	159
36	160.7	159.2	163.7
54	153.7	151.7	160
70	155	153.5	161.5
128	138	133.5	156.5
184	126.5	127.5	156
236	61.2	109	148
243	156.5	156.7	164.2
290	150.5	151.7	160.7
350	147	152.5	162.5

Sol

2754 taken from Reg production of last Sept. bad Curley Heavy flock
The other 2 cells are the same
Except 2 more hand made + heavy
The outside plates in all
Cells have 8.5 gm Reg Fe.

A 4 643 646 & 775

Reversing loaded cells - double Temps

643 - Nickel 881 - 4 leads a

646 " " a

775 " " a

21K 100 Volt

Run	643 1V	643 1/2	646 1V	646 1/2	775 1V	775 1/2	
4	169.2	182.5	181.5	192.5	183.2	192.7	Between 256 & 279 both heads seem to have slowly lost to the right of lost chg. th
19	188.5	194.2	196	202.5	199	204.7	slowly - stubborn chg
34	194.2	202.2	202.5	213.7	195.5	204.0	dont take off field
49	188.5	195.7	200	209.7	189.5	197	Capacity somewhat good sounds overdrop but they want come up!
65	198.7	210	205.5	218.7	201	213	
91	201.5	218.7	205	224.7	203	223.5	Remote not for Spot test wind directly below 1V
133	201.5	216	205	222	203.5	220.0	
249	204.5	226.7	202.5	227	204.5	228.5	New Electrolyte
256	209	225.7	205	225	205	225.7	temp's on overdrop, tests
279	200.7	217.7	192.2	213	198.2	217.2	on for spot tests -
343	192	205			188	204.2	333 Ra 775 has been on Regular
					185.5	204	366 decay down to Zero to see if will go bad -
			341 182.2	199.5			

643 is on Spot Temp test or 646 is carrying on test not directly below 1 V off.

See note in Mallard's book

643-646-775

Normal

Run	643 1V	646 1V	775 1V	
7	162	167.5	167.5	
24	165.5	169.2	168	
39	172	174.5	169	
53	166.5	172	163.7	
73	172.7	175	171.5	
93	172	172.7	172	
107	174.2	176.5	174.2	
136	175.7	176.5	175.5	
149	173.2	173	173.7	
209	174.2	173.7	175	
232	171.2	171.2	172.5	
258	174	171.5	178	New Electrolyte 21K 112.5 Volts
260	180.2	175.5	176.7	Run
343	168		165	333
		344 159.5	162.5	390

A4 Cells 10794 to 10803 Contain different amounts of EtOH. all other particulars Cells are identical

Run	50 grms EtOH 10794	10795	10796	60 grms EtOH 10797	10798	70 grms EtOH 10799	10800	80 grms EtOH 10801	10802	90 grms EtOH 10803
19	168	168.5	170	171.7	175	177	176.5	177.5	179	183.5
34	170	174	173	176.5	180	184	181.5	184.5	185.5	187
52	172.5	176	176	178.5	183	186.7	187	190	192	196.3
69	171.0	174.2	171.5	176	180	183.5	183	188.7	189.7	196
121	163.5	167.5	166.2	170	175.5	179.5	179	184	184.2	190.2
24	144.2		145.5		151		152		157.2	
38	151.5		154		154.5		162.5		167	
57	150		151		158.3		161.5		165	
73	150		151		160		162		166	
125	147.5		148		155		160		163.2	

Normal

Run	80 grms EtOH 10800	10801	10802	90 grms EtOH 10803
19	184.5	189	182.5	186.5
34	187	191.5	185	189.2
52	190.5	196.3	186	190.5
69	191.5	200	189.5	197
121	188.7	196.7	189	196.5
24	153		159	163.7
38	165.5		163.5	170.7
57	167.5		165	173
73	168.2		168.2	170.5
125	164.5		163	166.5

Run	195	196	197	198	199	200	201	202	203
19	182.5	184	187	187.5	192.5	184	197	192	193
34	192.7	192.7	192	192	197.7	192	196	197.7	200.7
52	195	195	195	202	195	201			
69	195	197	197	204.5	197	205.7			
121	192	192	192	200.7	193	203.7			

7h at 30

X note - through a misunderstanding solutions were emptied with 107.97 + 107.98 after the 24th Run these cells were refilled with 21 K + 11.2 d. per Ccs.

50

50 171
171

60 180
183

70 189

80 191.5
189.5
2) 381
190.5

80 189
2) 379
189.5

50 171 150.5

60 181.5 161

70 189 165.5

80 190.5 168.2

90 196 170.5

3255
2494
1175

4070
2613
1458

3720
2494
1175

3849
2709
1140

3805
2775
1135